

Work Order ID 138047

138047

Page 1

Thursday, October 22, 2015 7:32:40 AM

Item ID: D4777-1 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Rod End Bearing
Start Date: 10/21/2015 Start Qty: 18.00 ***18*** Cust Item ID:
Required Date: 10/21/2015 Req'd Qty: 18.00 ***18*** Customer:
Reference:

Approvals: Process Plan: ML5 Date: OCT 22 2015 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____
Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4777	A

100 PURCHASING 0.00
100
Purchasing Memo 0.00
Purchasing Issue P/O: 30221
Purchase Part Number: 59915K274 Supplier: Mc Master Carr
Certificate of conformity is required

C.Y. OCT 23 2015 18

110 Receive & Inspect for Damage & Mat'l Certs 0.00
110
Packaging Memo 0.01
Packaging Ensure certificate of conformity is attached

Ex 8015-1027

120 QC6- Inspect dimensions to drawing 0.00
120
QC Memo 0.00
Quality Control

18 DAS
38
9-89

OCT 27 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Start Date: 10/21/2015 Start Qty: 18.00 ***18*** Cust Item ID:
Required Date: 10/21/2015 Req'd Qty: 18.00 ***18*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <i>St 125</i>	0.00							
130						<i>18</i>	DAS		
Packaging	Memo	0.00				6			OCT 28 2014
Packaging						9-80			
140	QC21- Final Inspection - Work Order Release	0.00							
140									<i>15/10/28</i>
QC	Memo	0.03							
Quality Control									

30151028

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Thursday, October 22, 2015 7:32:44 AM

Page 1

Work Order ID: 138047

138047

Parent Item: D4777-1

D4777-1

Parent Item Name: Rod End Bearing

Start Date: 10/21/2015

Required Date: 10/21/2015

Start Qty: 18.00

Required Qty: 18.00

Comments: IPP REV:A 12.10.03 NEW ISSUE DD VERF:JFS

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
59915K274		Purchased		No		110	Each	0.0000	1	18			
59915K274									**				
Rod End Bearing													

18x 8215-10-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

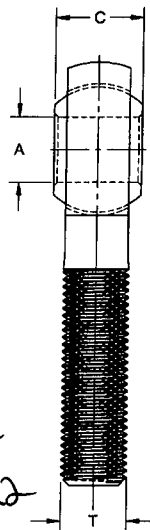
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

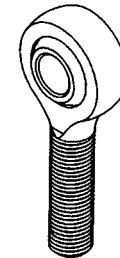
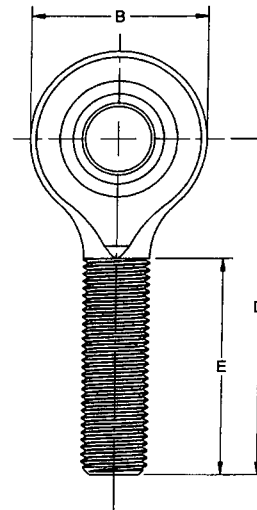
Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER :			
Misidentified	☐	Past Due	☐				

SPECIFICATION CONTROL DRAWING

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 138047 MJS
15-10-22



ROD END BEARING



DART P/N	HOUSING MATERIAL	A	B	C	D	E	T (THREAD SIZE)	SUGGESTED SUPPLIER	SUGGESTED SUPPLIER P/N
D4777-1	STAINLESS STEEL	Ø0.38	1.00	0.500	1.94	1.25	3/8-24 (RIGHT HAND)	MC MASTER CARR	59915K274

RELEASED
2013-08-14

REV.	NEW ISSUE	AJS	13.08.08
DESIGN	AJS	BY	DATE
DRAWN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	D4777	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ROD END BEARING	NTS
DATE	13.08.08	COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30221**

Purchase Order Date 10/21/2015

PO Print Date 10/23/2015

Page Number 3 of 6

Order From :

VU-MCM001

Ship To : DART AEROSPACE LTD

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 330 995 5500

Ship To Contact

Ship To Phone

Ship Via: Purolator ground ppd

Ship Acct:

Buyer

Customer POID

Customer Tax # 10127-2607

Terms Net 10

Currency USD

FOB FCA - (Free Carrier)

Chantal Lavoie

7	98409A171	Internal Retaining Ring (Chromate-Plated Steel)	10/28/2015	FN	50.00	\$0.22	\$11.08
			Yes		Each		
			10/28/2015				

AS PER DWG D5345 REV.A2
B138074

Line Total: \$11.08

8	59915K274	Rod End Bearing	10/28/2015		18.00	\$17.14	\$308.52
			Yes		Each		
			10/28/2015				

AS PER DWG D4777 REV. A
B138047

Line Total: \$308.52

9	71900-90	8491A812 DRILL BUSHING	10/28/2015		10.00	\$8.90	\$89.00
			Yes		Each		
			10/28/2015				

Line Total: \$89.00

Deliver To: DAVID.D

Note:

10/23/2015

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO30221

Order Placed By
Chantal Lavoie

McMaster-Carr Number
2452334-01

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10/23/2015

Line	Product	Ordered	Shipped
1	6264K85 Highly Corrosion-Resistant Roller Chain, 304 Stainless Steel, ANSI #40-Stainless Steel, 1/2" Pitch, 10' LG	1 Each	1
2	5709A52 Ball-Point Hex Set, L-Key, 13 Piece, .050"-3/8", Plastic Indexed Caddy	3 Each	3
3	5709A18 Ball-Point Hex Set, L-Key, 9 Pieces, 1.5MM-10MM, Plastic Indexed Caddy	3 Each	3
4	5855A13 Ball Peen Hammer with Hickory Handle, 8 oz Head, 1" Face Diameter, 11-3/4" Overall Length	1 Each	1
5	5720A33 Cushion-Grip Screwdriver, 3/8" Tip Width, 8" Long Slotted Square Blade	3 Each	3
6	7260A222 Adjustable Wrench with Cushion-Grip, Black Finish, 6" L, 15/16" Jaw Cap	1 Each	1
7	98409A171 Zinc/Yellow Plated Steel Internal Retaining Ring, for 5/8" Bore Diameter, Packs of 50	1 Pack	1
8	59915K274 PTFE-Lined Stainless Steel Ball Joint Rod End, 3/8"-24 Right-Hand Male Shank, 3/8" Ball ID, 1-1/4" L Thread	18 Each	18
9	8491A812 Press-Fit Drill Bushing, 0.1875" (3/16") ID, 3/8" OD, 1/2" Length	10 Each	10
10	29415A55 High-Speed-Steel 1/2" Diameter Reduced-Shank Drill Bit, 1", 6" Overall Length, 2.10" Drill Depth	1 Each	1
11	10095K97 5' Length of 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 1	1 Pack	1
12	10095K24 1/4" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
13	10095K21 1/8" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
14	10095K17 1/16" Diameter Round Nozzle for 1/4" ID, Loc-Line Any-Which-Way Coolant Hose, Packs of 4	1 Pack	1
15	7736A86 TIG Torch, Water Cooled, Series No. 20, 25' Rubber Hose	1 Each	1
16	71455K58 Disposable Alkaline Battery, Size AA, Packs of 144	1 Pack	1

SP15-10-27

Notes about your shipment

The U.S. Department of Transportation regulates the shipping of line 16. By purchasing from McMaster-Carr Supply Company, you agree not to transport or permit others to transport purchased items except in accordance with U.S. law and any other applicable laws.